## REMARKS

Reconsideration and timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the pending Office Action, the Examiner rejected claims 1-4, 6, and 14, under 35 U.S.C. §102(e), as being anticipated by Schneider '871 (U.S. Patent No. 6,737,871); rejected claims 18-19, under 35 U.S.C. §102(e), as being anticipated by Miller '019 (U.S. Patent No. 5,325,019); rejected claims 7-8, 13, and 15-17, under 35 U.S.C. §103(a), as being unpatentable over Schneider '871 in view of Miller '019; and rejected claims 7-8, 13, and 15-17, under 35 U.S.C. §103(a), as being unpatentable over Schneider '871 in view of Miller '019; and rejected claims 9 and 17, under 35 U.S.C. §103(a), as being unpatentable over Schneider '871 in view of Miller '019 and Tarzwell '187 (U.S. Patent No. 5,982,187).

Prior to this Amendment, claims 1-19 were pending, of which claims 1, 14, and 18 were independent. By this Amendment, claims 2 and 4 have been cancelled without disclaimer or prejudice and claims 1, 14, and 18 have been amended to provide a clearer presentation of the claimed subject matter. Applicants submit that no new matter has been added. As such, claims 1, 3, and 5-19 are currently presented for examination, of which claims 1, 14, and 18 remain as the sole independent claims.

Applicants respectfully traverse the rejections, under 35 U.S.C. §§102(e), 103(a), for the following reasons:

### I. Prior Art Rejections Under 35 U.S.C. §§102(e), 103(a).

Independent claim 1, as amended, sets forth voltage probe, comprising:

> a transmission line having an inner conductor and an outer conductor;
>
> ***an electrode, disposed within the transmission line and spaced apart from the outer conductor;***

> ***a dielectric, disposed between the electrode and the outer conductor*** . . .
>
> a lead in electrical communication with the electrode, the lead passing through an opening through each of the dielectric and the outer conductor . . .
>
> ***wherein the dielectric is attached to the electrode and an inner surface of the outer conductor.***

As indicated above, amended claim 1 positively and clearly recites that the electrode and an inner surface of the outer conductor. Such features are amply supported by the Specification. For example, in describing various embodiments of the present invention, the Specification clearly discloses that the voltage probe **10** is incorporated into a transmission line **12** having an inner conductor **14**, an outer conductor **16** and dielectric material **17** therebetween. The voltage probe **10** includes an electrode **18** and a dielectric **20**. The electrode **18** is spaced apart from the outer conductor **16** by the dielectric **20** such that the electrode **18** is not in direct electrical communication with the outer conductor **16**. The dielectric **20** is disposed adjacent an inner surface **24** of the outer conductor **16** between the electrode **18** and the outer conductor **16**. With this configuration, the electrode **18** is capacitively coupled to the transmission line **12**. (*See, e.g., Specification*, page 4, par. **[0020]**; FIG. 1).

As best understood, there is nothing in any of the applied prior art references that teach the combination of features recited by independent claim 1. In particular, the Schneider '871 reference is directed to a non-invasive cable tester for high voltage (*e.g.*, 5-kilovolt to 35-kilovolt) URD cables and has nothing to do with intra-transmission line voltage detection. Even ignoring this deficiency, the teachings of the Schneider '871 reference still fail to demonstrate the features of amended claim 1. For example, the Schneider '871 reference discloses a cable tester **10** that includes a sensor **102** comprising a first plate **104**, a dielectric **106**, and a second plate **108** for sensing the electric field in which the dielectric **106** connects the first plate **104** to the second plate **108**. (*See, e.g.*, Schneider '871: col. 5, lines 26-30; FIG. 1). The cable tester **10** is configured such that, during operation, it can be externally applied to the URD cable **20** so that the first plate **104** ***can be positioned as near as possible to the outermost***

***surface of the URD cable* 20 *and around as much of the outermost surface of the URD cable* 20 *as possible.*** (*See, e.g.*, Schneider '871: col. 5, lines 54-57; FIG. 1).

As such, the Schneider '871 reference clearly fails to teach or suggest, among other things, the use of an electrode that is disposed within the transmission line and spaced apart from the outer conductor, a dielectric that is disposed between the electrode and the outer conductor and attached to the electrode and an inner surface of the outer conductor, as required by claim 1. In fact, by requiring that the first plate **104**, the dielectric **106**, and the second plate **108** be external to the transmission line, Schneider '871 effectively teaches away from the recitations of claim 1.

Moreover, none of the applied references cure the inadequacies of Schneider '871 noted above. Specifically, with respect to the applied references, Miller '019 discloses a capacitive voltage probe **17** that ***surrounds the transmission line*** in order to electrostatically determine the voltage of the signal from source **11**. The particular capacitive voltage probe **17** is comprised of ***a metal tube which surrounds the RF transmission line and which is separated from it by insulation***. (*See, e.g.*, Miller '019: col. 4, lines 39-45; FIG. 2).

Equally deficient is the Tarzwell '187 reference, which is directed to a resilient probe having an extensible spring made from a cylindrial tube. (*See, e.g.*, Tarzwell '187: col. 2, lines 61-63). Not only does Tarzwell '187 clearly fail to teach or suggest the use of the use of an electrode that is disposed within the transmission line, spaced apart from the outer conductor, with a dielectric disposed between the electrode and the outer conductor and attached to the electrode and an inner surface of the outer conductor, as required by claim 1 – it has nothing to do with intra-transmission line voltage detection.

Applicants, therefore, submit that because none of the applied references teach the combination of features recited by claim 1, none of these references can be construed as anticipating claim 1. Applicants further submit that, by virtue of their respective deficiencies, none of the applied references can be reasonably combined to render claim 1 unpatentable. Moreover, as best understood, none of the remaining

references of record can be used to render claim 1 unpatentable. As such, claim 1 is patentable over all the references of record.

Furthermore, because claims 3 and 5-13 depend from claim 1, claims 3 and 5-13 are patentable for at least the reasons presented with respect to claim 1 as well as for their additional recitations.

In addition, because independent method claims 14 and 18 recite features similar to claim 1, claims 14 and 18 are patentable for at least the reasons presented with respect to claim 1. Also, because claims 15-17 and claim 19 depend from claims 14 and 18, respectively, claims 15-17 and claim 19 are patentable for at least the reasons presented with respect to claims 1, 14, and 18 as well as for their additional recitations.

For the reasons discussed above, Applicants submit that pending claims 1, 3, and 5-19 are patentably distinguishable over all the references of record. Accordingly, reconsideration of the pending claims and withdrawal of the prior art rejections, under 35 U.S.C. §102(e) and §103(a), is respectfully requested.

## II. Conclusion

All matters having been addressed, Applicants respectfully requests the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of pending claims 1, 3, and 5-19.

Applicant's Counsel remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
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